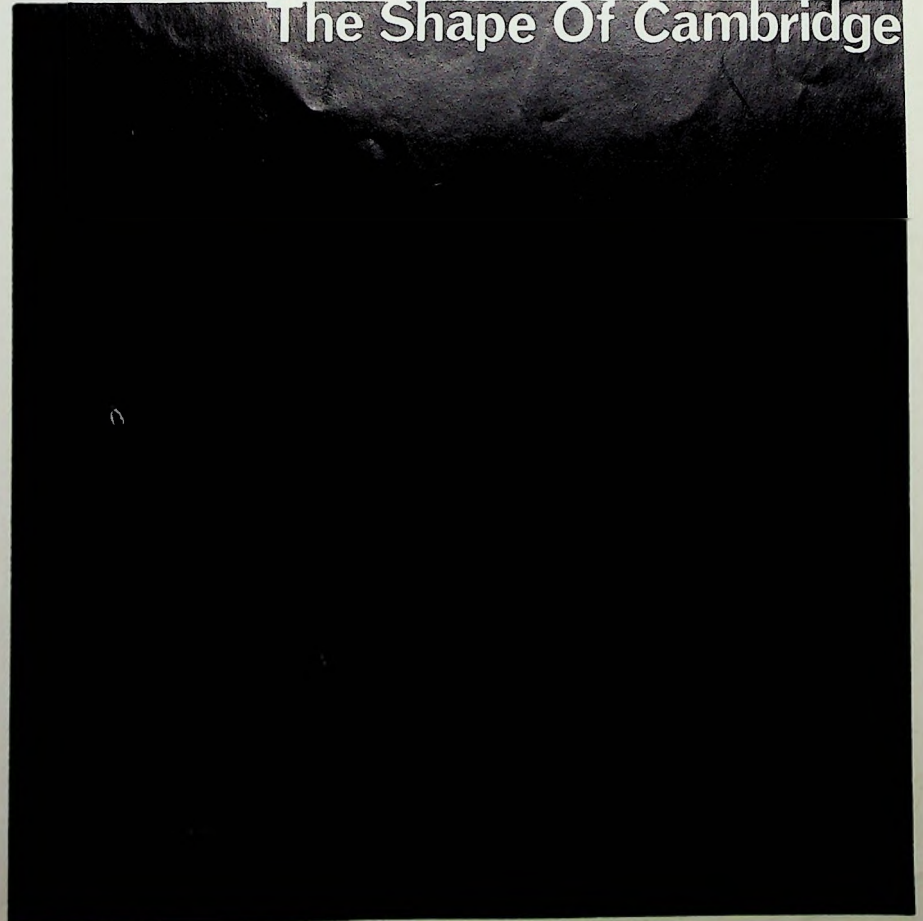


# The Shape Of Cambridge



# Basic Aims

## University town.

What are the areas of agreement? The County Development Plan states as a first basic aim

### **That Cambridge should remain predominantly a University town.**

This is agreed: but this statement should be amplified. 'Predominantly a university town' is not exact enough for the formulation of a policy and is of little use as a criterion for a planning decision. Cambridge would still remain predominantly a university town if an historic building were to be replaced by a car park, or if central areas, that could be rebuilt with advantage to the character of the city, were left untouched or developed piecemeal.

The University attaches importance to the preservation of the historic centre – and this applies to streets as well as buildings. But it places equal emphasis on the redevelopment of certain central sites where there may well be an opportunity to extend and enhance the character of the existing centre.

The University has, therefore, proposed that the first basic aim should be

### **To maintain and enhance the character of Cambridge as a university town.**

## Regional centre.

In the first Review of the written statement (1961) the County took the opportunity to restate and clarify the first basic aim by adding a recognition of

### **the second important function of Cambridge as the social, cultural and commercial centre of the surrounding region.**

This again may be generally agreed but it follows that if this view is accepted it is necessary to accept also all the con-

sequences. Cambridge as a regional centre is deficient in the extent and range of its shopping, in its car-parking facilities and in its road access to shopping areas. Above all a regional centre with adequate car-parking facilities means room for expansion.

The needs of a regional centre must be matched by an adequate and far-sighted plan. To try to meet these needs at the existing centre by piecemeal development and without adequate room for expansion must conflict with the first basic aim. The needs of shopping, car-parking and road requirements cannot be imposed on a mediaeval town plan without destruction. And if the first aim is the preservation and enhancement of the existing centre the second must clearly be

### **to create in Cambridge a regional centre capable of meeting the needs not only of the city but of the wide area surrounding the city**

and this must be achieved without conflict with the first basic aim.

*Council of the Senate Comment on the Development Plan, 13th May, 1952:*

*The Council (of the Senate) think that this central area, which Professor Holford described as a 'precinct', should include most of the existing University and College buildings. They believe that the safeguarding of the character of the precinct is not only of local but of national interest, for the character of the University itself will be influenced by the degree to which this is achieved. In making their comments on such aspects of the Plan as appear to them to affect the University and the Colleges collectively, the Council have kept this overriding aim in view.*

*Council of the Senate Statement in the County Council's Lion Yard proposals, 27th April, 1959:*

*The Council (of the Senate) have always advocated that there should be ample provision for shopping and other commercial activities in Cambridge, for the population both of the City and of the County which is envisaged by the County Development Plan. They would welcome modern shops, 'multiple' or otherwise, laid out for the convenience of shoppers and shopkeepers. in the right place. They believe that this is an inevitable and necessary development and that it should be carried out where there is ample space for further expansion, for a 'bus station appropriate to the needs of Cambridge and the area served by it, for car parking and other facilities, and where the roads and approaches may be designed to meet all future traffic requirements.*



# Change

## Preservation, improvement, concentration.

**We hope that the special character of central Cambridge will be preserved as a unique blend of market town and colleges. But every town which is alive is continuously changing, and may change a great deal in a comparatively short time.**

Cambridge has changed continuously in the last century. It has changed its size. It has changed its skyline. At its historic centre the continual ingrowth of its commercial development, even where it has not changed the street scene, has completely changed the street conditions. Pavements have been narrowed to allow for more traffic but are used by more people. Rear access areas have been built over in an attempt to satisfy shopping demands of a completely different scale and intensity from those of a mediaeval market town.

The rate of change is continuously increasing and this type of change if continued will destroy the centre. But other changes in the past have improved the centre. The gain of open space in King's Parade and Market Hill is an example. Fine views of King's College Chapel and Great St. Mary's have been obtained.

It is clearly essential to recognise those forces causing change in the historic centre and to encourage those which will lead to the maintenance and enhancement of character and the reduction of traffic. Civic development could do this. So too could centralised university development and an increase in the amount of housing within walking distance of the centre.

## Expansion, traffic, movement.

But other forms of change will create traffic, the need for car-parking and road improvements. Some of this can be avoided – for instance, an outward movement of any population that can be housed at the centre creates unnecessary traffic. The outward movement of population is shown in the following table.

	Population	Number living within 15 mins. walking distance of centre	Percentage of total
1901	53,000	37,000	69%
1961	95,000	28,000	30%
1971	100,000	25,000	25%

This shows a steady decline in the numbers of people who might walk to the centre and the Plan continues this trend. Unnecessary traffic should be reduced wherever possible (e.g., by more central housing).

But Cambridge is also the centre of a region in which between 300,000 and 400,000 people now live. With increasing car ownership and a higher standard of living a considerable number of these people, as well as the population of Cambridge itself, will use the central shops. All this means change – change that will increase congestion and require more shopping space, car parking and roads.

It is therefore necessary to recognise two types of change – **the first** at the historic centre guided towards preservation, enhancement of character, concentration of related uses, traffic reduction, **the second** (which can be destructive of the first if it is not properly placed) requiring expansion, increased shopping, car parking and roads.

The proposals that follow are based on a clear recognition of this distinction, and the need to implement both policies without conflict.

# The Historic Area

## Monuments and preservation.

Let us examine first the historic area. A map showing the scatter of historic monuments and scheduled buildings defines its own boundaries – Castle Hill to the north, New Square to the east, Lensfield Road to the south and the Backs marking the western boundary.

These main historic buildings are connected by a mediaeval street pattern, and interwoven with these areas are the commons and open spaces.

It is this particular relationship of buildings, streets and green spaces that gives Cambridge its unique character and it is here that

**the primary aim must be one of preservation of those areas – not merely buildings – which have special architectural character or historical significance.**

Maids' Causeway, New Square and Orchard Street form such an area. Little St. Mary's Lane and Botolph Lane form another. In these areas the preservation of individual buildings is not enough. Their setting in relation to the street and to the street scene of Cambridge itself is equally important and the total effect should not be whittled away by road widenings and car parks.

Within these areas there is scope for various types of improvement of a Civic Trust kind: the possibility for instance of bringing New Square back to grass.

## Redevelopment areas.

In the historic area of Cambridge there are, however, exceptional opportunities for rebuilding certain areas which could enhance existing amenities and lead towards the objectives stated.

First, there are sites occupied by buildings which are inappropriately housed in the central area or which can have more adequate buildings elsewhere; these include:

(a) The site of the electricity works, referred to in the Cambridge plan as an opportunity for collegiate development and a new river frontage.

(b) The site of the Pitt Press (which is at present being moved out to the industrial area). Here again is a further opportunity to open up land leading to a river frontage.

(c) The site of Addenbrooke's Hospital, which it is hoped in time will become available for University use as the new hospital buildings are completed elsewhere.

Two of these ((b) and (c)), make possible a more comprehensive plan for the development of the central University sites which can now be considered as a series of related areas from the New Museums site to Lensfield Road.

In addition Park Street, King Street and Castle Hill all present special opportunities for rebuilding to provide more centralised residential accommodation which might bring city residents, dons, graduate students and undergraduates nearer to their work.

At the centre of these developments the Lion Yard occupies a key position as the last opportunity to extend the civic centre - and perhaps to add to central housing.

#### Centralisation and population.

The policy proposed for the historic area is to bring together those civic, University and residential uses which build up its character as a university town and which, by the way they are brought together, will reduce traffic.

A key factor in this is the distribution of the University population and the possibility of concentrating its teaching facilities.

The centre of the University undergraduate population falls in the Lion Yard, very near St. Andrew the Great. The principal University teaching areas extend and can be developed to the south of the New Museums site which is within 100 yards of this centre.

The consideration of this relationship of residence and teaching is of great importance in the formulation of policy; for instance:

(a) Any major movement of University teaching activities to the west (to the sites reserved in the County plan) would, on the present distribution, have the effect of increasing undergraduate travel.

(b) A policy of increasing undergraduate and post-graduate accommodation by development near or on sites surrounding this centre can reduce travel to walking distances and must reduce traffic on the roads.

Finally it is important to note that the centre of minimum aggregate travel for the total population of Cambridge in both 1948 and as projected in 1971 occurs at the junction of East Road and Newmarket Road. An expansion of the present commercial centre in this direction would therefore decrease household travel.

#### University policy on central sites.

The Cambridge plan proposed the future expansion of the University primarily in west Cambridge. A considerable total acreage of land is shown in the plan under the general heading of university use. The plan does not make any distinction between university and college ownership or between the different categories of university use.

University uses can be subdivided into the following classifications:

(a) extensive uses: the University farm, the Botanic Gardens, the Radio-Astronomy laboratory, field laboratories, etc.,

(b) teaching and research use,

(c) residential use (which could include collegiate accommodation),

(d) industrial use (Pitt Press).

In considering the land zoned for university use in the plan, these distinctions must be recognised.

With regard to teaching and research, the University has stressed the importance of retaining as much of this as possible on its central sites. As a matter of policy, research involving heavy equipment has been removed to Madingley Road and other outlying sites. But in two reports to the University on general policy for the development of teaching and research the General Board of the Faculties has stated that one of the special considerations constantly before them was

the advantage that accrued from the close proximity of the various literary and scientific departments and the loss that would be involved if it were no longer possible for the greater part of the teaching and research to be housed on the present central sites.

The planned removal of certain arts faculties to Sidgwick Avenue will release a limited amount of space on the central sites and make possible the first steps towards the redevelopment of the central area.

The County argument for western development appears to be based on the fact that there is land available there. It remains for the University to show whether its main teaching and research needs can be accommodated on its central sites.

*More to west  
if western development  
will not come at full  
in to central sites?*



# Central University Area

## Definition.

The central sites available to the University now and in the future include the New Museums site, the Downing site, the Addenbrooke's Hospital site, in part at least, the Pitt Press and Mill Lane area, the Fitzwilliam Museum site and, at the southern end of this area, Scroope House and the Lensfield Road site. Outside this central area there are the University Library and Sidgwick Avenue sites, and the more outlying Madingley Road sites which are clearly unsuitable for centralised teaching needs.

The redevelopment of these central sites will not be easy. They contain substantial existing buildings and any programme of redevelopment must be related to the funds available and the rate at which buildings become obsolete.

The University has repeatedly stressed however that in the interests of teaching and research an effort must be made to redevelop this central area. Fortunately, the removal of the Pitt Press and the rebuilding of Addenbrooke's Hospital elsewhere provide an opportunity for potential gains of teaching space and studies of a built-up site like the New Museums site have shown that a gain of floor space can be accompanied by an opening up of the site itself.

The central University sites are capable of being planned comprehensively and in order to assess this problem Messrs. Chamberlin, Powell & Bon have been asked to assist the University by making a study of the possibilities of redevelopment.

## Space for central teaching needs.

An assessment of the floor space required for central teaching needs in Cambridge in the future involves considerations of possible increase in numbers of undergraduates and research students, possible developments in the range of subjects studied, the requirements of their developments in research and an estimate of improved standards of space required.

Figures showing the numbers of undergraduates in Cambridge for the last 20 years show a definite increase, but a falling off in the rate of increase in the past few years. Corresponding figures for research students show a consistent increase. The number of research students is just under one eighth of the total undergraduate population.

An estimate of the requirements of new developments in research cannot be made nor is it easy to assess the improved standards of space required.

It is, however, possible to assess the capacity of the central sites in terms of floor space and to relate this to its capacity in terms of total population.

This can then be compared with present numbers and the margin between these illustrates the capacity for growth within the central sites.

A similar assessment can be made for the Sidgwick Avenue site.

## Capacity.

It is essential to an effective development that the central sites should be considered as a whole. Apart from the sites which will be vacated by other types of building (Pitt Press, Addenbrooke's Hospital), it is reasonable to assume that other standing buildings will become obsolete and inefficient and that over a period of 50 years the sites could be progressively redeveloped. Other sites, (Lensfield, Scroope House and the Fitzwilliam Museum site), are already committed to other uses.

For the purpose of a general assessment these central sites (excluding the Fitzwilliam site) can be taken as a whole. The total site area is about 1,500,000 sq. ft. In order to assess a reasonable floor space for such a site it could be assumed that the floor space index (i.e. the relation of floor space to site) is 2:1. This does not necessarily involve bulky or massive buildings and there is a strong case for accepting this for University use. But if it is considered to

be high a lower and generally acceptable figure of 1.5:1 could be used. With a floor space index of 1.5:1 there would be available 2,250,000 sq. ft. With an index of 2:1 there would be 3,000,000. An undergraduate student of science may need 100 sq. ft. to 150 sq. ft. and a research student 350 sq. ft. to 500 sq. ft. including space required for academic and assistant staff in each case. If the more generous figure is taken as being appropriate to the future and if it is assumed that there will be 5,000 undergraduate students of science and 2,000 research students (considerably more than at present), 1,750,000 sq. ft. would be needed. There is therefore a considerable margin for any likely new development.

A calculation based on the Sidgwick Avenue site, however, "using a lower floor space allowance as is appropriate for arts students" shows that on the completion of the development there will be ample accommodation for as many arts students as are likely to be admitted.

This is clearly a generalised assumption which can be tested by more detailed plans: it will be affected by phasing, by existing buildings and the number of special buildings (e.g. University Clubs, Faculty Rooms, etc.) which might be required. But the various assessments that have been made indicate that the central University sites could provide for a considerable expansion in the foreseeable future if that is considered necessary.

## Physical development.

There are, therefore, solid grounds for the view that by progressive redevelopment of its central sites (and new building at Sidgwick Avenue) the University could adequately accommodate any population increase in the foreseeable future.

But on the central sites what form could the development take?

# The Lion Yard

**First:** it would have to be achieved in stages as sites were made available. The density of development might not be even. It might be high at one point but low at another in compensation.

**Second:** what is important is an acceptable physical form. An arbitrarily imposed control by floor-space index is neither a guarantee of form nor even an acceptable common measure of floor space.

The fundamental ideas behind future development of the particular central university sites have already been studied in principle by Mr. Leadun for the New Museums site, and by Messrs. Howell, Killick and Partridge for the Pitt Press site.

One suggested some tall buildings at its centre; the other a series of low buildings around courts. The inclusion of tall buildings is not the main issue. What is more general and more far-reaching is the basic conception of multi-level development with a car park below ground and the possibility of laboratories, workshops and museums forming a second layer above this. The roof of this second layer could become the main pedestrian circulation space linking sites to each other – on this and around it would be the new teaching buildings.

The raised deck would become the connecting link providing a new and segregated level for pedestrian movement.

In defining Cambridge as a university town the University places equal emphasis on the word 'town'. The heart of the town is the Market Square – Petty Cury area with the Guildhall as its physical symbol.

The Lion Yard provides a splendid opportunity for the expansion of the civic centre by the creation of new public buildings and one major civic square.

The University has consistently opposed commercial development on this site:

**First:** because this site is essentially a part of the historic centre where a growing scale of commercial development cannot be achieved without the destruction of character.

**Second:** because an intensive commercial development carries with it the need for car parking on a massive scale, a road system to serve this and, above all, room for expansion. The University believes that this provision on the Lion Yard site conflicts with the first basic aim of the plan and that a far more effective alternative site can be found.

**Third:** the University believes that new civic buildings are required to meet the needs of a developing city and that this is the only site on which they can be built.

Above all, a civic development on a new scale will bind together a replanned university development and the expanded commercial development to serve the region.

The University wishes to see a development in the Lion Yard as quickly as possible. In its view that development should include

(a) A multi-purpose public hall (for which the University as well as the City has a need and towards which it has offered to contribute half the cost). Such a hall would accommodate concerts, dances, receptions, meetings, exhibitions, games, etc. It would facilitate a Guildhall extension.

(b) A new library.

(c) An exhibition gallery and arts centre.

(d) Restaurants and hotel extensions.

These are all essentially central buildings tied closely to the needs of the historic centre. They require proper road approach and car parking but only on a modest scale compared with commercial development, and used mainly (for a civic hall for instance), at off-peak periods. The University sees the Lion Yard development as one which is linked to that of the New Museums site so that space saving could be obtained by linked underground car parks. Pedestrian spaces could extend throughout the sites and buildings could be effectively related to each other.

The possibility is now open to create a fine new 'place' linked to Market Square and St. Andrews Street and extending from the Arts Theatre to St. Andrew the Great. On one side of this 'place' there would be the extended Guildhall and a new frontage for all the premises in Petty Cury, including perhaps a new extension to the Lion Hotel. At the other side, the new University buildings, the new Civic Hall and Library would take their place. Within such a scheme there remains the possibility of preserving such buildings as Fisher House.

But a development in the Lion Yard could make a still greater contribution to the centre of Cambridge. At its southern end it could also accommodate about 300 people in central housing.

*Council of the Senate Comment on the County Development Plan, 13th May, 1952:*

*In the view of the Council (of the Senate) the redevelopment of the Lion Yard area to provide new sites for shops and offices is inconsistent with the diagnosis of the problems of the central area. The Council . . . believe that if the object of the Plan is to preserve the character of Cambridge as a University town the effect of such a scheme of redevelopment as is proposed might, in the long run, be disastrous.*



# Central Commercial Area

## Holford proposals.

The University supports the statement that Cambridge is a regional centre. It supports the idea of commercial development on an appropriate scale and in the right place.

In the Cambridge plan proposals Sir William Holford wrote:

The population of Urban Cambridge was 62,500 in 1900 and is 104,000 today. It would, therefore, be foolish to regard a growth to 150,000 by 1990 as impossible, though for reasons stated later we hope this will not occur. We have mentioned earlier that we do not think the central area can efficiently serve a population much greater than the present one. A centre serving a population much larger than this requires more land than is ever likely to be available in the historic centre of Cambridge. In particular, it requires broad streets, capable of taking heavy bus and car traffic, and easy access from all sides or nearly all sides. We see no prospect of fulfilling these last requirements in the traditional central area, and therefore recommend that land should be reserved elsewhere for an extension of the commercial centre, if this becomes necessary in the future. The most suitable place for this extension is, in our view, the land in the angle between Emmanuel Road and Parker Street. During the last twenty years the centre of gravity of Cambridge's buildings has moved eastwards, and the centre of gravity of its life has been to some extent artificially restrained from a similar movement by the lack of bridges in the east and the pull of the established central area. Once the new bridges are built there will be, we believe, a natural tendency, if Cambridge continues to grow, to extend the older commercial centre eastwards.

That, in the University view, is a correct diagnosis. It was written fourteen years ago. Cambridge is serving a population much greater because of its growing regional significance. The future is with us now.

## Increase in demand.

Sir William Holford's prediction was made before the era of the affluent society, at a time of austerity and petrol rationing. The changes that have occurred since then which make it necessary to plan for an extension of the commercial centre include

(a) **Mobility.** Nationally, car ownership has grown about three-fold since 1948, and car ownership in Cambridgeshire is higher than the national average. Increasing car ownership results in more people visiting Cambridge and an increase in the frequency of their visits. Cambridge today serves between 300,000 and 400,000 people, and they visit Cambridge not only to shop but also to make use of its other facilities and because it is Cambridge.

(b) **Increased spending.** Between 1948 and 1961 there was an increase in total consumer expenditure of over 40% in real money terms. The increase in clothing and household durable goods (refrigerators, television sets, saucepans, etc.), in the same period was nearly 90%, and almost all this type of expenditure occurs in regional shopping centres because of the wider selection of goods available in such centres.

(c) **Population increase.** The development plan is based on the assumption that by 1971 the population in the town area will rise to 100,000, and in the rural districts to 87,400, making a total of 187,400. The 1961 census figures for the County of Cambridge (189,913) show that the population estimate has already been exceeded ten years ahead of the development plan date. Cambridge county is part of an eastern region in which the population increase is greater than that of any other region in England, and the proposals for de-centralisation from London will bring additional population in the area served by Cambridge.

## University proposal.

If the responsibility and advantage of being a regional centre is accepted (and it cannot be avoided), then there must be adequate provision for commercial expansion in

the right place.

A regional shopping centre requires:

(a) Car parking on a large scale either within or very close to the centre.

(b) Adequate public transport services leading from all parts of the city.

(c) An adequate road system leading to the centre and provision for servicing the shops.

(d) The segregation of pedestrian and vehicular traffic.

(e) Adequate sites for shopping and other related uses to meet both present and future needs. Some of these sites must be large enough to house department stores, variety chain stores and supermarkets, which form an increasing feature of regional centres.

To provide for these needs in the historic centre will inevitably destroy its present scale and character and thus defeat the first basic aim of the plan. Regional shopping in Cambridge as elsewhere is a function complementary to other city centre activities. Its needs must be met within easy walking distance of the civic buildings and existing shops. The area bounded by Maids' Causeway, Newmarket Road, East Road, Parkside and Emmanuel Road (the City Road area), fits the requirements of being outside the historic centre and yet close to it. It is an area requiring comprehensive replanning and redevelopment, and is within easier reach of the majority of the citizens of Cambridge than the present commercial area, and can be effectively combined with it.

## Comparative sizes.

The University proposals for the central area thus envisage the historic centre with its mixture of shops, university and college buildings and civic buildings, with a re-developed Lion Yard containing new civic buildings and a new commercial area to the east.

# The Regional Centre

Will this work? Are the distances too great? Some comparisons may answer these questions.

The new centre for Stevenage is designed as a pedestrian central area. When this plan is placed over that of the combined centre for Cambridge they are comparable in extent. The figures of comparative population, area served and car parking are:

	Stevenage	Cambridge (University proposals)	Cambridge (plan proposals)
Population:	80,000	100,000	100,000
Catchment area:	140,000	300,000 plus	300,000
Central car parking up to:	12,000	10,000	2,000

A further comparison may be made with the carefully planned proposed town centre for Hook. In this case the Cambridge centre falls well inside the proposed area of pedestrian shopping.

*Council of the Senate Comment on the County Development Plan, 13th May, 1952:*

*The Consultants do not think that the present central area could efficiently serve a population much greater than the present one, and they recommend that land should be reserved for a possible extension of the commercial area to the east. The Council (of the Senate) think that such a move should be begun now to the New Square - Fitzroy Street neighbourhood, without adding to the existing commercial centre, and that this could be encouraged by the suitable siting of the Bus Station adjacent to this new commercial area. It is ripe for development, and a new shopping centre could well be laid out with ample provision for car parking.*

## Form of development.

Within the defined area of development, certain areas could be preserved (New Square and Orchard Street for example). The removal of the New Square car park (which would no longer be necessary), and the re-grassing of this area would form an extension of Christ's Pieces - an open area within the surrounding development.

On the remaining site a phased redevelopment could meet the needs of the new regional shopping centre and the expanding needs of its associated car parking.

But any such development must carry with it the rebuilding of residential accommodation. There is now evidence to show that a carefully planned redevelopment of such a site could meet the needs of garaging and shopping and, at the same time, create a housing gain.

This will not be achieved without a comprehensive plan and it will entail the inconveniences and difficulties of urban redevelopment. Against this must be set the positive advantages: preservation in the historic centre, an adequate regional centre, adequate car parking, more and better housing in the inner area of the city and an opportunity to carry its cost as part of the total redevelopment.

## Description.

The linking together of car parking, shopping and housing to form an effective urban development again involves a multi-level arrangement.

At the lowest level (semi-basement) garage space of 7,000-10,000 cars might extend throughout the site including an area set aside for public transport. Other areas could be provided for shop servicing and stores. From this garage level there could be direct access at various points to the main pedestrian shopping deck - the level immediately overhead and a half level above the surrounding streets. The shops might be arranged on this deck along arcaded walks or around courts, so that the area was designed for

pedestrians, was sheltered, and contained cafés and restaurants.

Above and around this again the housing might be placed. This could take the form of dwellings of many different types. The private open spaces for these dwellings could form ranges of terraces and hanging gardens.

The total height of this development from the surrounding streets would not exceed that of the buildings in King's Parade. From the deck level within the scheme itself the effect would be one of open squares surrounded by terraced housing.

*Council of the Senate Statement in the First Review of the Development Plan, 1st July, 1960:*

*The Council (of the Senate) attach great importance to the redevelopment of the area bounded by Maids' Causeway, East Road, Parkside, and Christ's Pieces . . . This area should, in their opinion, be redeveloped as a whole so as to provide both high density residential accommodation and a shopping centre.*



# Traffic

The expanded commercial centre with its heavy and expanding traffic demand and indeed the University proposals for preservation and improvement of the historic centre cannot succeed without an effective road plan.

An effective road plan should:

- (a) show the greatest benefit for the cost involved (this demands clearly defined priorities);
- (b) serve the growing needs of different types of traffic;
- (c) be compatible with the other aims of the plan: e.g. avoid congestion at the historic centre, or the destruction of the centre by road widening, or the division of integrated land uses;
- (d) allow for change to correct or encourage future development.

The road proposals in the Development plan do not appear to meet these requirements in the most effective way. They are not compatible with the aim of preserving the historic centre. The priorities can be questioned.

## The present picture.

It is generally agreed that positive action is now necessary to deal with the traffic problem of Cambridge. The traffic on Victoria Avenue, the heaviest in Cambridge, has increased by 25% between 1956 and 1960. In the same period the Queens' Road traffic has increased by nearly 50% – a greater increase than that of any other road. Traffic in the central area is also increasing but at a lower rate than in the surrounding streets because of congested conditions.

The types of traffic to be dealt with include:

- (a) traffic passing through the area (20% of the traffic entering the city);
- (b) traffic to the commercial centre taking shoppers or goods;
- (c) travel from home to work;

(d) business travel;

(e) social and sightseeing traffic, including that connected with the railway station.

Most vehicles are private cars, and the majority of car journeys start or finish at houses. The population diagram of Cambridge shows that 75,000 people live in the east, only 8,000 people live to the west. The distribution of traffic shown by the 1956 survey demonstrates that very little traffic comes in from the west. A study of the origin and destination of traffic again illustrates that the greatest activity occurs south-east of the central area, where there is industry and the railway station, and to the north and north-east, where a large quantity of housing occurs.

## County Plan proposals.

The Cambridge Plan proposes several relief roads including a by-pass system and an inner spine relief road. It appears that priority will be given to the following sections of the road plan:

- (a) Chesterton Road and bridge connecting to Milton Road and Newmarket Road;
- (b) a 'spine' relief road connecting Histon Road Corner to Hyde Park Corner, including a new road and bridge between Histon Road Corner and Jesus Lane;
- (c) a new west road from Storey's Way to Barton Road;
- (d) Chaucer Road link from Trumpington Street to Barton Road.

The University has always supported the proposals for the Chesterton Road and bridge. However, they do not agree with the proposal for the spine relief road since it will cause destruction in the historic area, attract more traffic to the vicinity of that area without effectively relieving conditions there, and will either form a barrier to the natural extension of the Centre into the City Road area.

The County's proposals do not effectively solve the central

area traffic problems. The commercial centre cannot survive healthily in the historic centre without damage from road improvements and parking improvements. However good the public transport system may be it is unrealistic to provide only 2,000 parking spaces for a commercial centre as important as that of Cambridge.

## University proposals.

Road proposals must be related to the priority of needs. As a first step a new road extending southwards from a new Chesterton Bridge along the Gwydir Street and Tenison Road line to connect with Brooklands Avenue appears to provide a major advance in dealing with Cambridge traffic problems. High priority given to an eastern road of this kind would:

- (a) provide a road which, along the greater part of its length, was proposed by Professor Holford but is not at present in the County Plan;
- (b) serve as a main through traffic road;
- (c) serve as a relief road in an area where traffic is particularly heavy;
- (d) serve as an access road to the central area and particularly to the expanded commercial centre and its extensive car parking in the City Road area;
- (e) retard, if not eliminate, the need for by-pass roads on the west side of the city – an improved road from Chesterton Bridge to the north-west would meet the needs of through traffic to and from this area;
- (f) serve the industrial area and the railway station, which are not adequately served in the County Plan proposals;
- (g) remove any danger to the preservation of the historic centre;
- (h) form part of a simpler comprehensive road plan;
- (i) contribute more effectively to immediate needs per mile of road constructed.

Further studies of such a road proposal will clearly be required but planning on these lines will ensure that the present and future needs of Cambridge are well served.

## Residential Areas

The University policy for the historic centre, for the commercial expansion and for a road system to serve these is made complete only by a policy for housing closely and conveniently related to the centre, as a traffic-reducing measure and as an alternative to urban sprawl.

Professor Holford wrote:

**We propose for reasons given in paragraphs 213-14 that efforts should be made to arrest the outward sprawl of low-density housing. These cannot be successful unless inner residential districts, now becoming dilapidated are redeveloped with modern dwellings. The prejudice against living in inner districts can most easily be removed by encouraging redevelopment of the most suitable areas and removing any threat of the intrusion of other uses which at present hangs over them.**

Professor Holford went on to specify densities and showed that in New Town for instance, at a density of 70 persons per acre, the then existing population of 2,055 people and 95 students could be practically re-housed. But as a result of more recent work it is certain that without introducing any tall buildings there could in fact be a housing gain. Instead of this policy of concentration Cambridge appears to be adopting one of planned dispersal.

If the Cambridge Plan figures for New Town are taken as a guide the present proposals for the inner housing sites do not seem to be fulfilling the original policy.

If we take New Town/Mill Road as an example

the population in 1948	6,109
Holford proposal	6,009
decrease	100

In the written statement (1961) the following figures are given:

population in 1949	6,050
population in 1959	5,200
proposed population	4,790
decrease on 1948 figures	1,260

Whilst this order of population decrease is proposed at the centre, suburbia is being increased.

The Holford proposal for the population of the Arbury Road estate was	11,817
The written statement now proposes	16,940

By comparison with recent urban proposals (the New Town of Hook, for example, or recent work in urban housing) the average densities are low. The land occupied by housing in Cambridge is vastly greater than the land occupied for the same number of people in the Hook project.

As the town expands at low density the population living within walking distance of their work (15 minutes) has steadily declined.

### University proposals.

A policy for centralised housing could go much further than Professor Holford envisaged with immense gain to the convenience of residents. Within the central area, two potential areas of central housing, the Lion Yard and the City Road area, have already been mentioned: both these sites with the development proposed could show a housing gain. The site of the electricity works if used for University residential purposes would again make a contribution. This housing (with the exception of the electricity works site) would almost certainly be of a high-density, urban type.

But outside this central area and at the same time within the line of the proposed through road there is a belt of sites (following the curve of the road from New Town and ending at Castle Hill). These are, like New Town (as described by Professor Holford), the ideally situated inner residential areas. All of these contain at present Victorian property. Each one must surely be rebuilt within the next few decades and an opportunity exists to reverse the dispersal tendency in Cambridge planning.

### Description of inner housing.

There are, then, ready to hand, a number of sites perfectly

sited to central housing development if we care to use them. The curve of the new through traffic road defines the limits of the inner area. From any point within this curve the distance to the Guildhall is no greater than a fifteen-minute walk and from many parts it is a great deal less.

Within this curve, the secondary radial roads leading to the centre divide the belt of housing into sectors. In each sector the housing could be planned around an inner park of grass and trees which would provide a recreational area and the pedestrian approach to the centre. Pedestrians would have a grass- and tree-lined approach to the centre - inwards. The radiating road system would take cars outwards to the through road and its rapid access out of the town and to other areas of Cambridge.

Few towns in England have this opportunity of so conveniently recreating an inner housing area.



# Aims

The views that have been expressed in this exhibition are complementary. No single one is complete in itself, but taken together they suggest a framework for a plan for Cambridge. This can be summarised:

- (a) to preserve and enhance the character of Cambridge as a University town;
- (b) to reduce at the centre those uses that conflict with this basic aim, but at the same time to enable Cambridge to continue to function effectively as the centre of the region;
- (c) to develop the University central sites comprehensively, retaining the relationship between teaching and research and residential accommodation;
- (d) to redevelop the Lion Yard as a civic centre;
- (e) to expand the commercial centre of the City eastwards to allow adequate space for regional shopping needs, car parking and road access, in order to relieve the historic centre;
- (f) to provide Cambridge with an efficient road system to serve its growing needs without destroying the historic centre;
- (g) to arrest the outward sprawl of low-density housing by redeveloping the inner residential districts.

*Council of the Senate Statement on the County Council Lion Yard Proposals, 27th April, 1959:*

*In the Council (of the Senate's) view a choice, which once made will be irrevocable, now lies between, on the one hand, maintaining the present character of the centre of Cambridge and providing for major commercial expansion elsewhere, or, on the other hand, deliberately intensifying commercial development of the centre in a manner which is bound to attract further development to that area, thereby also discouraging and delaying the well-planned development of the Fitzroy Street area. The Council suggest that the first alternative is the only sound one.*



